



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,790	03/29/2004	Shinichiro Watanabe	81754.0121	9491
26021	7590	10/18/2005		
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			EXAMINER LAU, HOI CHING	
			ART UNIT 2636	PAPER NUMBER

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No. ✓

10/811,790

Applicant(s)

WATANABE, SHINICHIRO

Examiner

Hoi C. Lau

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1- 20 have been examined.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-8, 14, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Liyama et al. (U.S. 6,489,883).

Regarding **claim 1**, Liyama's system comprises:

Rectifier for rectifying an induced electromotive force caused by bringing an antenna coil into close proximity to a reader/writer (question unit) to generate a rectified voltage (column 4, lines 13-17 and column 6, lines 2-6);

a secondary battery (29); and

charging circuit (4 and 8) for being charged according to the rectified voltage and for discharging the secondary battery (column 6, lines 2-21).

As to **claim 5**, it is inherently teaches the device is constructed by electronic circuit (figure 2 and column 7, lines 54-67 and column 8, lines 8-14).

As to **claim 6**, it teaches a transceiving device for data communication with the reader/writer (question unit) (column 3, lines 56-59 and column 5, lines 64-66).

As to **claim 7**, it teaches the transceiving device includes the antenna coil (column 6, lines 2-4).

As to **claim 8**, it is inherently teaches the transceiving device includes a resonance circuit where the resonance circuit could constructed with an antenna unit with capacitor which is acted as a tuning circuit (column 6, lines 2-4).

Regarding **Claim 14**, it is a claim corresponding to apparatus claim 1, and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

As to **Claim 18**, it is a claim corresponding to apparatus claim 6, and it is therefore rejected for the similar reasons set forth in the rejection of claim 6, supra.

As to **Claim 19**, it is a claim corresponding to apparatus claim 7, and it is therefore rejected for the similar reasons set forth in the rejection of claim 7, supra.

Regarding **Claim 20**, it is a method claim corresponding to apparatus claim 1, and it is therefore rejected for the similar reasons set forth in the rejection of claim 1, supra.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883).

As to **claim 10**, Liyama's device teaches the use of a secondary battery (29).

It would have been obvious to one of ordinary skill in the art any conventional battery is included an internal resistance within the component where any components or materials have resistance consider as resistor.

As to **claim 11**, Liyama's device teaches a detection circuit (3) for comparing the output signal level of the transceiver (1) with a predetermined reference level while the voltage of the electric-supply switching circuit (9) obtained by the received signal and the battery voltage are compared with each other (column 4, lines 19-39 and column 6, lines 1-21).

It would have been obvious to one of ordinary skill in the art the combination of the detection circuit (3) and electric-supply switching circuit (9) could detected a drop in the rectified voltage while compared the predetermined reference voltage level to the rectified voltage.

4. Claims 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883) in view of Graham (U.S. 6,424,125).

As to **claim 2**, Liyama's device comprises:

A internal battery which is comprised with capacitors that stores a charge according to the rectified voltage (column 4, lines 1-6 and column 7, lines 37-40);

A resistor (22) through which the capacitor supplies discharge voltage to the secondary so as to charge the secondary battery (figure 2 and column 8, lines 1-6);

A diode that prevents the charge charged in the capacitor form flowing to a portion other than the secondary battery (figure 2 and column 8, lines 11-14).

It fails to clearly state the resistor acting as a time constant resistor.

Graham's device teaches the use of a time constant resistor for discharge circuit (figure 2 and 3 and column 3, lines 14-19).

It would have been obvious to one of ordinary skill in the art any circuit design as a RC circuit would easily function as a time constant components where it could modified as a charging or discharging circuit in term of increase the efficiency of the process.

As to **Claim 15**, it is a claim corresponding to apparatus claim 2, and it is therefore rejected for the similar reasons set forth in the rejection of claim 2, supra.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883) in view of Walton (U.S. 4,384,288).

As to **claim 9**, Liyama's device teaches a secondary battery (29).

It fails to show the battery is a paper type battery.

Walton's device teaches the battery is a paper type battery (column 1, lines 67-68).

It would have been obvious to one of ordinary skill in the art to implement a paper type battery into Liyama's device because it would minimize the size of the component and end product.

6. Claims 12 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883) in view of Eberhardt (U.S. 6,404,339).

As to **claims 12 and 13**, the combination meets all the limitation of claims except it fails to show an electrophoretic display wherein display includes a writing voltage, current and a display holding time.

Art Unit: 2636

Eberhardt's device teaches an electrophoretic display with the RFID tag (column 3, lines 55-56 and column 9, lines 49-51).

It would have been obvious to one of ordinary skill in the art to implement an electrophoretic display into Liyama's device since Liyama's device already includes a control circuit and memory because it would provide visual signals indicative of tag operating states.

It would have been obvious to one of ordinary skill in the art to display any information on the display, including without limitation, a writing voltage, current and a display holding time because it would be an arbitrary decision from the manufacturer.

7. Claims 3 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883) in view of Graham (U.S. 6,424,125), in further view of Busser (U.S. 6,011,488).

As to **claim 3**, the combination meets all the limitation of claims, except it fails to show the capacitor is a device serving as an electric double-layer capacitor.

Busser's device teaches the capacitor is a device serving as an electric double-layer capacitor (column 3, lines 21-33).

It would have been obvious to one of ordinary skill in the art to implement a double-layer capacitor into Liyama's device because double-layer capacitor is smaller in size but larger in capacitance than the conventional capacitor while quickly charged and of supplying a regulated voltage to a load.

As to **Claim 16**, it is a claim corresponding to apparatus claim 3, and it is therefore rejected for the similar reasons set forth in the rejection of claim 3, supra.

Art Unit: 2636

8. Claims 4 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liyama et al. (U.S. 6,489,883) in view of Graham (U.S. 6,424,125), in further view of Busser (U.S. 6,011,488).

As to **claim 4**, the combination meets all the limitation of claims, except it fails to show the diode is defined as a first diode and the capacitor is defined as a first capacitor, and

the means for charging and discharging further comprises:

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor.

Busser's device a circuit (4) comprises:

first diode and a first capacitor, and

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor (figure 5 and 6 and column 4, line 65).

It would have been obvious to one of ordinary skill in the art to modify or design the circuit with the similar arrangement because it would increase the voltage multiplication ratio for the specific needs in order to fit with the intended use.

As to **Claim 17**, it is a claim corresponding to apparatus claim 4, and it is therefore rejected for the similar reasons set forth in the rejection of claim 4, supra.



*Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

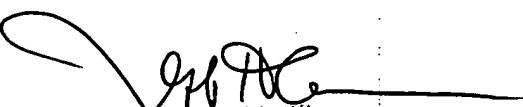
- a. Nakane et al. (U.S. 2002/0153997) "Semiconductor integrated circuit".
- b. Yamaguchi (U.S. 6,747,548) "Non-contact IC card system and ...".
- c. Goto (U.S. 6,079,622) "Non-contact information storage medium...".
- d. Hayashi et al. (U.S. 2001/0000659) "Reader and/or writer apparatus...".
- e. Yokota et al. (U.S. 6,011,958) "No-battery information storage medium...".

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoi C. Lau whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HCL

  
JEFFERY HOFSSASS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**